

Planning Perspectives 3Q 2023

Integrity in Investing Systematic Strategy for Uncertain Times





"No man ever steps in the same river twice. For it's not the same river and he's not the same man."

- Heraclitus, ancient Greek pre-Socratic philosopher

This is part of a series exploring integrity in professional wealth planning

Key takeaways:

- Recent market recovery has been driven by an extremely concentrated asset class growth segment
- Equity investors are dominated by the "Boomer" generation that expects continued market growth
- Market expected returns are low due to extreme valuations in U.S. and international growth stocks
- A systematic strategy, globally diversified with a fixed income allocation should work regardless

A wise Greek philosopher once observed that when you return again to what appears to be the same situation, expecting the same experience, it's never the same. The conditions change incrementally each day, or the river is crossed in a different place. The weather or season differs. People have moved and been replaced. Even more, either we have changed since that passing, or an experience related to the last crossing changed us—say a chance encounter. When we return again, expecting the same experience as before, the only certainty is that we are older, and that means we have changed.

A new crossing experience is interchanged with good and bad past experiences of crossing, often half-forgotten times past, of family and those who have moved on or passed on.

Trading in combined capital markets around the world is much like crossing a great river, a veritable flood of \$676 billion of transactions daily all buying or selling hoping to profit. Every day is the same, and yet every day is different. And as transactions happen and are observed, both sides keep changing.

Looking back and ahead

Certain *Wall Street Journal* headlines and a couple of clients departing made me recall Heraclitus from years ago. People become confident that the way that markets have performed in the past few years will more-or-less continue, so what worked then will work tomorrow. The fog of price volatility in the markets always makes future expectations

hazy. Those headlines and their departure brought to mind many client meetings in the months preceding the bust of the great dot.com boom that began in January 2000.

Back in 1998 we believed that the market river had changed. We stopped chasing growth stocks upward to attract or keep clients. Our contrarian story was unpopular. Yet most stayed and more than a few agreed with how we believed markets worked. Crossing the flood that followed was painful for everyone.

Those who stuck with our philosophy and process of planning survived their river crossings while many they know personally suffered badly. Markets currents often pushed clients off course in unpredictable ways for a while. The depth of the river was surprising, but because they survived, they later could thrive.

Many of those people, now in their 60s and 70s, are still



clients. They and those that have joined us since have crossed the market river so many times and in so many places that it seems familiar. My concern is that familiarity breeds contempt. Market risk seems to have lost much of the respect it deserves. Risk-taking is way up. The market stays within certain boundaries, *but only for the most part*.

This July in Vermont around in the region near where I grew up, generally picturesque rivers like the Lamoille and Winooski flooded towns and homes along their pastoral banks. Flood levels were the highest since 1927. Few long-time residents had ever imagined such flooding. Never having experienced a flash flood in their lifetime, most never bothered to own flood insurance. Many lost everything in a day.

Boomer Credo: In the Market We Trust

Nearly two-thirds of U.S. adults ages 65 and older own stocks either directly, through stock mutual funds, or in retirement savings accounts, reports *The Wall Street Journal* from a Gallup survey. That is up from half of Americans of the same age before the 2008 financial crisis. Relative to the Silent, Gen X, and Millennial generations, Baby Boomers directly or indirectly hold well over half of all corporate equities and mutual-fund shares—the only group to see an ownership rise since 2008.

A huge portion of Baby Boomers seem to have abandoned conventional financial wisdom to reduce risk by rotating equity allocations away from stocks into less volatile fixed income bond allocations. Combined with strong familiarity bias, noting that the U.S. stock market has grown over 700% since early 2009 make equity investing appear better for returns needed to retire than fixed income. That returned about 46% for the same period. CDs in banks

or money markets mostly have returned close to zero. Furthermore, the discipline for saving for a far-off future need is disagreeable. Boomers prefer to spend for big houses, multiple cars and vacations that may be enjoyed today. Decades of poor decisions as retirement draws nigh motivates FOMO behavior to catch-up and get rich quick. Winners brag about their successes on social media. Losers tend to stay silent, causing information asymmetry.

"America's Retirees Are Investing More Like 30-Year-Olds," headlined another *WSJ* article.² The article with its own sampling bias observed that nearly half of Vanguard 401(k) investors over 55 held nearly 70% of their portfolios in stocks and equity funds. For Fidelity Investments, 40% of those 65 to 69 held two-thirds or more in equities. In 25% of those aged 75 to 84 in their Vanguard brokerage accounts—a sober firm not prone to speculation—have all their money in stocks; over 20% of investors 85 or older do. While sensible investors would balance their strategies with CDs and money markets, we are doubtful.

Boomer Speculative Faith

Robert Shiller, a Nobel laureate economist at Yale University in the same *WSJ* article observed: "The spirit of the times is 'Don't worry about the markets crashing. They will come back up and set new highs." The Baby Boomer contingent (born 1946 to 1964) began saving and investing beginning in the 1980s, the decade when Ronald Reagan was President for two terms, whose then-controversial policies such as tax cuts sparked an American economic boom, encouraging technological innovations in computing and telecommunication, and along with it, a historic stock market boom. Indeed, after 1987, 2001, 2008 and 2020 the Federal Reserve and Congress stepped in with programs to support the U.S. economy. Further,

Exhibit 1: Boomer Experience: Changing Perspectives of Market Returns

Period July 1965 - June 2023, Asset class returns as experienced by segments over lifetimes

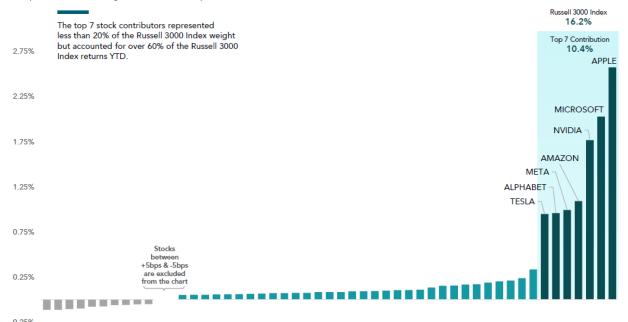
	Boomer Period	Early Life	Adult Years	Middle Life	Later Life
	July 1965- June 2023	July 1965- June 1981	July 1981- June 2023	July 1981- June 2009	July 2009- June 2023
U.S. Large Stocks	10.2	7.0	11.5	10.2	14.2
1-Yr U.S. Fixed Income	5.2	7.0	4.6	6.5	0.8
50/50 U.S. Stocks/Bonds	7.7	7.0	8.0	8.4	7.5
U.S. Inflation	4.0	6.8	2.9	3.2	2.5
Net Real Return	3.7	0.2	5.1	5.2	5.0

Source: S&P 500 Index Source: Standard & Poors Index Services Group, prior to 1990 is Ibbotson, SBBI. ICE BofA 1-Yr U.S. Treasury Note Index Source: ICE BofA 1-year U.S. Treasury Note Index, prior to 2000 Merrill Lynch 1-year Treasury Bill Index, prior to 1992 CRSP/DFA. U.S. Consumer Price Index Source: Bureau of Labor Statistics, All Urban Consumers, not seasonally adjusted. Past performance is not a guarantee of future results. Indices are not available for direct investment; therefore, their performance does not reflect the expenses associated with the management of an actual portfolio.









Source: Dimensional Fund Advisors. Past performance is no guarantee of future results. Returns and weights are derived from Russell 3000 Index published security weights, Dimensional computed security returns. This information is intended for educational purposes and should not be considered a recommendation to buy or sell a particular security. Named securities may be held in accounts managed by Dimensional. Frank Russell Company is the source of Russell Indexes. Indices are not available for direct investment; therefore, their performance does not reflect the expenses associated with the management of an actual portfolio.

progressively interest rates declined from a historic high to a historic low, greatly reducing the cost of investing capital, so that equity risk was more attractive and making bonds much less so over time.

The Boomer cohort ends in 1964. *Exhibit 1* frames how Boomer cohort would have perceived market returns before and during their adult working years. There are two distinct periods, but let's first look at the "Adult Years" which we divide in two periods, both aided and abetted by the emergence of 401(k) plans, discount brokers and no-load mutual funds. For "Middle Life", beginning in the Reagan revolution, large stock returns are 10.2% for the period and 6.5% for safe, short-term fixed income. Inflation was just over 3% for that period. This is normal. The oldest Boomers are 35 and just beginning to seriously accumulate; most are forming households. These returns are similar to the overall Boomer period.

In the aftermath of the Global Financial Crisis in 2009 and continuing until now are the Boomer "Later Years." As the inevitability of retirement for Boomers wakes them up, savings and investing capture their attention. Since most have under accumulated or had substantial GFC losses, attention is drawn to market returns, aided and abetted by the financial media. To drive economic recovery with a

series of "Quantitative Easing" schemes, the Fed contrives reasons to keep interest rates low, which aids and abets all the deficit spending. Stocks returns are 14.2% annualized for "Later Life" while fixed income is in the measly 1% range while inflation averages 2.5% annualized. The math is easy for Boomers: saving in banks is a loser (awash with government bonds, banks don't need their money anyway). Demand for growth stocks boom as prices rise, interest rates keep moving to and then staying at zero. With government always there to rescue it, Boomers come to believe "The Market" will save their retirements.

FOMO Bulls Running Fast

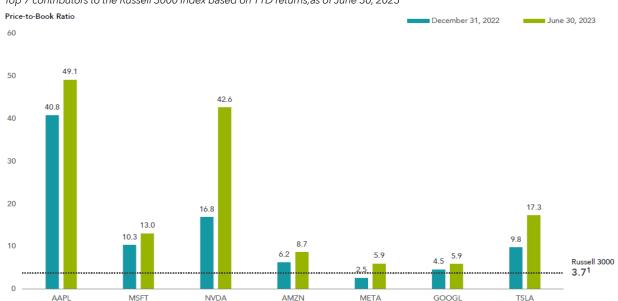
Exhibit 2 shows Boomer faith working today: the "Magnificent Seven" stocks with less than 20% of broad stock weighting account for 60% of returns year-to-date. This crowded positioning stirs serious worries of vulnerability to a rapid price reversal, as happened to the so-called "FAANG" stocks back in 2022.

Exhibit 3 illustrates Price-to-book equity ratios for the "Magnificent Seven." For perspective, the historical P/B ratio for the U.S. Russell 3000 is about 2, but here is 3.7. Globally, growth is 8.8. The U.S. growth P/B is 17.3; Apple's alone is 49. For all US large stocks, it is 4.1. By comparison, the aggregate P/B of US value stocks is 1.65,









1. Aggregate Price-to-Book Ratio as of June 30, 2023

Source: Dimensional Fund Advisors using Morningstar and Dimensional data. Holdings are subject to change. The criteria Dimensional uses for assessing securities on company size, relative price, and profitability are subject to change from time to time and may differ from the criteria a third-party manager may use. This information is intended for educational purposes and should not be considered a recommendation to buy or sell a particular security. Named securities may be held in accounts managed by Dimensional. Frank Russell Company is the source of Russell Indexes.

only modestly higher than its average. US small caps stocks are near their 2.0 average.³

Our third WSJ headline: "Tech Stocks, Meme Stocks, Crypto: Investors Are Feeling Bold Again."⁴ The writer announces, "It's like 2022 never happened. Tech stocks are rising manically, spilling into meme stocks. The cryptoverse is enjoying a resurgence. Bullishness is hitting a fever pitch in the options market. In short, risk-on investments are the most popular they have been since late 2021 right before stock entered the longest bear market in decades." He further observes that the market fear index, the Cboe Volatility Index (VIX) has dropped so low, there is little demand for volatility insurance in options. Market price swings are small, who needs it?

This irrational exuberance is going on despite rising borrowing costs that will choke off credit to slow the economy. Boomers have no recollection of 1970s stagflation where rates continue to rise as inflation continues. And inflation will be energized as the U.S. government must increase borrowing as it pay higher interest on its gigantic post-COVID debt and huge social program package. Boomer parents, who suffered through years of stagflation, know better and hold less than 20% of their wealth in equities.

Speculation is a Losers Game

Investors ignorant of financial history (and likely much history worth knowing) and burned by crypto, MEME and SPAC losses, still holding chips to play, are desperate to recover from their 2022 losses. Social media groupthink makes manipulation easy, since you can't be sure of the motives of whoever is messaging. Financial media sends out "financial news" daily promoting "money making" schemes for those pretending to be traders. Should Boomer adults play this game? More than a few are, it seems.

Trading is a zero-sum game. After expenses, it must be a net loser.⁵ (No fee? Don't forget market impact!) In 2022 the S&P 500 index of large U.S. stocks declined -18.1%; the five largest companies in 2022 dropped a whopping 38.7%! In 2023 to the end of June, the S&P 500 Index has risen 16.9%, but the new top five stocks have risen 68.2%. That's great, right? But pretend you owned those former top stocks through 2022 but had the genius to pick the new top five on the first trading day of 2023. Your net gain would be 3.1%—and that's ignores tax impact. Since no one is immune from big losses, a bank savings account beats many traders in the end. Lucky trading often happens; it's just that luck is not predictable.

Returning to Exhibit 1, compare the Boomer "Early Years" column with the others. That represents their younger years



in grade school, high school and maybe college when stocks held no interest.⁶ It was the era of "Nifty 50" stocks. Individual stocks were primarily owned back then. Index funds (much less "no-load funds") did not yet exist. One day in 1965 my 8th grade math teacher touted the benefits of buying stocks to our class, referring to his own success. One stock was IBM. IBM had a computer chip manufacturing facility in that same town, the world's largest at the time. It transformed what had been a modest town with big money and smart classmates. Other stocks might have been Johnson & Johnson and P&G, and stalwarts at the time such as General Electric, Eastman Kodak, Xerox, and Bausch & Lomb. For years until 1965, buying a group of "good" stocks to hold long-term had been the "smart" thing to do.

After earning my CFP and a MBA years later, and linking that innocent childhood experience with my knowledge

of market history plus the behavior of wayward clients from my professional experience, I gained an important insight: when someone far down on the investing food chain gives strong stock advice, do the opposite. Everybody must know it, so that information is already in those stock prices. While there

may be upward momentum for a while, the upside will not last. This is "market efficiency" 101. Notice Exhibit 1's "Early Life" column net of inflation: the return on a U.S. stock index equivalent and 1-year Treasury bills is identical, 7.0%, and the real return is slightly over zero percent. Bingo.

In late 2007 I traveled to visit my then-89-year-old father living isolated in a small Vermont nursing home. Mom had passed away a few years earlier, so he could not be alone. Dad dropped out of high school during the last years of the Great Depression and began a long career in the U.S. Navy. While he was smart, Dad wasn't well educated. On that visit Dad wanted to purchase more stock funds for the first time in his life. I interpreted that as signaling a market peak. Within weeks, the great 2008-2009 Global Market Crisis was underway, but I had been systematically fully rebalancing portfolios, selling the equity funds.

Historically uninformed Boomers are unfamiliar with that sixteen-year period's high inflation rate: 6.8% annualized. At that rate, prices double every ten years. No real return

before costs. The old "Nifty Fifty" scheme died as stocks over the next decade experienced their worst returns since the Great Depression. CPI rose to hit 12.3% by 1974. **Key Lesson:** When well-meaning but economically ignorant people hype stocks or a scheme, either change the subject or get new friends or golf partners. Your portfolio will thank you.

Market Equilibrium Will Prevail

Lest any reader suppose that I rely on behaviors to drive my investing management process, let me explain the underlying economic theory. The great idea of finance is that markets work. Markets function, in effect, as a vast information processing device gathering together all the dispersed information available about a company or groups of companies, evaluating that information almost instantaneously, and expressing that information as share prices on exchanges as they trade. Markets are a form of

artificial intelligence

Prices are set as a consensus view of a share's intrinsic value. Think of the "stock market" as a market for stocks. When all of a market's stocks are aggregated by capitalization weight, we obtain a consensus view of the market's intrinsic value.

Value is the function of a share's earning potential. Viewpoints of outsiders (such as my Dad) echo only a popular consensus. Degrees of motivation for taking action (to buy or sell) suggest and strength and depth of group think going on. When those whose financial knowledge is limited but suddenly expressive of a strong opinion one way or the other, particularly among my clients where we have screened out those not well aligned with our philosophy, it signifies prevailing group think, much like the proverbial canary that coal miners of the 1800s kept close in the depths to signal odorless but deadly gas.

A stock's value is best estimated by the price that participants are paying in real time. Statistically meaningless price fluctuation is ignored. Market prices are not related to financial statement book value. A stock's best estimated value is the market's equilibrium consensus of expected future cash flows (net of taxes) adjusted by an implied discount rate related to prevailing and future expected interest rates, further adjusted for the riskiness of a firm's future cash flows and their likelihood of increasing or decreasing over time. The implied



The Unexpected Strikes (Again), August 1971



Exhibit 4: Valuation Equation for Market Value

Price is driven by cash flows expected and discount rate

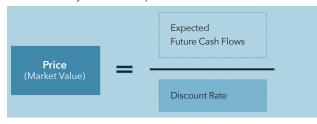


Exhibit 5: Valuation Equation for Expected Return

Expected return is driven by market prices paid and future cash flows



discount factor is the firm's cost of capital. The firm's cost of capital *and not the firm cash flows* is the investor's return, as the late Nobel laureate Merton Miller would remind Dimensional colleagues.

Investors expect capital markets to compensate them fairly for bearing uncertainty and chance of loss—and security prices in public capital markets incorporate those expectations, for the most part. Speculators bet on volatility and momentum and extrapolate patterns of price movements from past market performance. Short-term trading playing on volatility that has been driving up the "Magnificent Seven" has no expected return.

The Valuation Equation Further Explained

Market prices and future expected profits contain information about a stock's expected return. Consequently, economic theory predicts that profitability, together with size and relative price factors, should be related to expected returns of stocks. While size and price are observable—changes in price data are accessible moment-by-moment—we cannot similarly observe how profitability expectations are changing, so future cash flows always must be estimated. The firm's book value has no impact on price in the valuation equation.

The valuation equation for estimating price in **Exhibit 4**⁷ is simply the sum of all future cash flows discounted back to present value at an assumed interest rate. The greater the degree of uncertainty impacting likely future cash flows, the higher the discount rate. The discount rate is the cost of capital. Prices tend to be higher when there is greater certainty—and higher even still when the expectation for interest rates is low. They tend to be lower when there is greater uncertainty related to cash flows from company earnings or when interest rates are rising, as is the case at the present time.

Algebraically reworking the equation and solving for expected return shows that the discount rate is identical to a securities' expected return. See **Exhibit 5**. Expressing the relationship this way highlights two dimensions of expected returns for equities—relative price and profitability. Profitability is tied to the numerator and the dimension of relative price to the denominator. High expected returns

Exhibit 6: Comparing Changing Market Valuations Globally



The Fama/French Indices represent academic concepts that may be used in portfolio construction and are not available for direct investment or for use as a benchmark. **Source:** CRSP and Compustat data calculated by Dimensional Fund Advisors. Fama/French data provided by Fama/French. US Market represented by the Fama/French Total US Market Research Index. Developed Ex-US Market represented by the Fama/French International Market Research Index. Emerging Markets represented by the Fama/French Emerging Markets Index. Monthly aggregate price-to-book ratios are computed as the inverse of the weighted average book-to-market value as of month-end. Firms with negative book value are excluded. Book-to-market ratios above 10 are winsorized as the cutoff value in non-US markets.



are the result of having either higher expected cash flows or a lower price. But today's expected cash flows are reducing while stock prices—especially growth stocks—are high and rising. Likely the big bull market that began in 1982 cannot continue. The valuation equation logically implies that investors will not keep paying for long above-average valuations for below-average growth.⁸

If Something Can't Continue, It Won't

A recent Federal Reserve whitepaper warned of "significantly lower profit growth and stock returns in the future." That paper, "End of an Era: The coming long-run slowdown in corporate profit growth and stock returns," explained how lower interest rates and corporate tax rate trends for 30 years after the Reagan revolution finished a decade prior have been a strong tailwind for corporate profits. The valuation model we've discussed is applied to historical U.S. data. It shows stocks performed much better than would be normal. The period examined by the author happens to coincide with our Boomer life period. While predictions are not made as to how soon a reversion may occur, our contention that growth stocks, especially in the U.S., are very likely to underperform other dimensions of returns and regions outside the U.S.

Exhibit 6 illustrates changing market valuations over time both for the U. S. markets and for non-U. S. markets since 1989. While each year shows considerable volatility and no trends exist to exploit opportunistically, again it is clear that the U.S. market price-to-book achieved a valuation high by the end of 2021, immediately followed by a sharp downturn. 1999 shows a similar valuation high, immediately followed by prolonged downturn in U.S. markets—the Great Tech Bust. We previously discussed this in late 2021 before last year's share decline. We still expect continued recovery this year, but it is unlikely to be sustained for very long.

Providing hope for the future are non-U.S. valuations within relatively "normal" valuation boundaries, even though the non-U.S. growth stocks may stagnate. Portfolio structures for Professional Financial clients will include non-U.S. asset class allocations, both in stock and bonds for a balanced long-term planning approach. That will be especially important for Boomers retired or hoping to retire soon. While Dimensional chooses not develop asset class annual forecasts, Vanguard does provide for its customers a Capital Market Model with 10-year annualized return forecasts for equity and fixed income markets.

Exhibit 7 illustrates as we survey forecasted returns by asset

class, that Vanguard experts don't believe current U.S. stock valuations are justified. Return forecasts for U.S. growth stocks are particularly low. Bear in mind that Vanguard does not conform to implementing value, profitability and size as Dimensional does, and their index portfolios are unable to capture those dimensions of return. Disciplined clients of Professional Financial, however should mentally add at least a percent or two Vanguard's asset return modelling. Although the fog of market volatility confuses short-term outcomes, investment management that de-emphasizes "growth" are more likely to perform within ranges that we use for retirement planning.

Embracing the Crossing

Our purpose is to keep you looking beyond the current headlines and popular opinions enticing you to take actions that are not for your long-term advantage. We strongly discourage market timing efforts chasing returns. Market momentum can capture the appearance of

Exhibit 7: 10-year Annualized Forecast for Major Asset Classes

	Return Forecast			
	Lower Bound	Upper Bound	Median Volatility	
Equity Returns				
U.S. Equities	4.1%	6.1%	17.0%	
U.S. Large Cap Stocks	4.1%	6.1%	16.7%	
U.S. Small Cap Stocks*	4.4%	6.4%	22.3%	
U.S. Growth Stocks	1.4%	3.4%	18.2%	
U.S. Value Stocks*	4.4%	6.4%	19.6%	
U.S. Real Estate Trusts	4.4%	6.4%	20.1%	
Global ex-U.S. (unhedged)	6.4%	8.4%	18.2%	
Emerging Markets Stocks	6.1%	8.1%	25.9%	
Fixed Income Returns				
U.S. Cash/equivalents	3.4%	4.4%	1.4%	
U.S. TIPS	2.7%	3.7%	5.0%	
U.S. Treasury Bonds	3.3%	4.3%	5.7%	
U.S. Intermediate Credit Bonds	4.2%	5.2%	5.2%	
U.S. Aggregate Bonds	3.6%	4.6%	5.5%	
Global Bond ex-U.S. (hedged)	3.6%	4.6%	4.4%	
U.S. Inflation	2.0%	3.0%	2.3%	

Source: Vanguard. The Capital Markets Model is based on data as of March 31, 2023. Past performance and hypothetical projections from simulated performance are not assured. Opinions expressed are those of The Vanguard Group, Inc. For educational purposes only. For more information see:

https://corporate.vanguard.com/content/corporatesite/us/en/corp/articles/investment-economic-outlook-may-2023.html



"growth," and it can be exciting for a while, but successful outcomes require being right twice. That is hard. As last year showed us once again, markets can drop faster than you can react. We practice smart diversification considering the drivers of return identified by the best academic research and thoughtfully apply it to your personal situation, to better achieve your goals, hopes and dreams.

We help clients focus on the controllable:

- Maintain an informed investment plan that fits your needs and preferences.
- Rebalance a structured portfolio along the dimensions of expected returns.
- Stay diversified globally to smooth out regional ups and downs, including here
- Manage expenses, turnover and especially taxes whose benefits can be assured
- Help you stay disciplined, to help you relax and focus on your family and what matters

The probability of a positive return from our informed investing process increases over time—getting rich slowly. Yet this does not make investing less risky in the long run—the range of possible investing outcomes over long periods can be huge. The level of possible dispersion means investing does not become "safer" with time. But sensible, long-term investors whose goal is reliably planning to grow and preserve wealth for their families with globally diversified strategies, rather than trying to "beat the market," have odds for success strongly in their favor.

ENDNOTES

- 1. Hannah Miao and Amina Niasse, "Baby Boomers Remain Hooked on Stock Market," *The Wall Street Journal* (June 20, 2023), B1.
- 2. Anne Tergesen, The Wall Street Journal (July 4, 2023).
- 3. Dimensional Global Equity Markets (Q1 2023)
- 4. Eric Wallerstein, The Wall Street Journal (July 19, 2023).
- 5 Sharne Arithmetic
- 6. More likely, saving for a date or a car or going to college, etc.

We've seen market crisis more than once. We will see it again. No crisis is ever the same, just as no one crosses the same river twice. When it happens this time, it may come on like a flood. But we are committed to getting every client across. Back after 1999, all those who followed their plan got across. We did that again in 2008-2009. And we have done it again and again. Few firms can look back 30 years and say that.

I never thought I would see in my career the market conditions here in the U.S. as we had in the late 1990s. And while it looks the same, it is not the same river and I am not the same man. Still, our professional commitment is to the well-being of our clients to act in their best interest. I've met with so many firms to find a better firm to merge with. But at least for now, and what may be the last time, the firm I am most confident of making that crossing successfully—for you as well as myself—is Professional Financial.

Each crossing of the river changed me. The child in me wants to run away from the pain that comes each time; the man in me chooses to embrace it.

If you are a client of Professional Financial, you cannot avoid this crossing. But after you've committed to making the crossing, even though flood may come, once you are across, you will not be the same, but all the better for it.

Certainly that has been the case for me, every time—past performance, not guaranteed.

- 7. This is derived from the old Gordon Dividend Discount Model or DDM. By algebraically rearranging P = E/R to P/E = 1/R you have the popular price-earnings ratio. See "Expecting Great Returns and Great Investors," Planning Perspectives (1st Quarter 2009), pp. 5-8 for a fuller discussion.
- Those seeking more in-depth discussion may begin with "Investing in Times of Fictitious Capitalism," *Planning Perspectives* (2nd Quarter 2021).
- Michael Smolyansky, "End of an era: The coming long-run slowdown in corporate profit growth and stock returns," Finance and Economics Discussion Series 2023-041 (Board of Governors of the Federal Reserve System).
- 10. Paul Byron Hill, "Investing in Times of Fictitious Capitalism," *Planning Perspectives* (2nd Quarter 2021).

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